

Deep wells in monitoring of geological and geodynamic processes

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Abstract

© SGEM2015. The authors conducted monitoring studies using core and geophysical data on a number of deep wells that penetrated the crystalline basement in the eastern portion of the Russian Plate. Information on the deep structure of the Earth's interior was mainly obtained through geophysical studies that provided data for the construction of various structural depth models. Explicit data obtained through the study of core material from deep and ultra-deep wells can be of great importance. The new methods of studying the deep horizons of the Earth's crust can give more information about the geological and geodynamic processes in zones that were previously thought to be geodynamically stable. The character of geodynamic processes can be analysed through the creation of deep geo-observatories based on deep and ultra-deep wells. Results showed that the crystalline basement undergoes extensive geodynamic and hydrothermal changes mainly within specific mobile zones of the Earth's deep crust.

Keywords

Basement, Deep wells, Geological and geodynamic processes, Monitoring